UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,329	02/01/2001	Yuri J. Breitbart	BREITBART 14-8-1-39	9203

47394	7590	12/02/2005

HITT GAINES, PC
LUCENT TECHNOLOGIES INC.
PO BOX 832570
RICHARDSON, TX 75083

EXAMINER
BARQADLE, YASIN M

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/775,329	BREITBART ET AL.
	Examiner	Art Unit
	Yasin M. Barqadle	2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 September 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

1.   Applicant's arguments filed on September 19, 2005 have been

considered but are not deemed to be persuasive.

- Claims 1-21 are presented for examination.

- Claims 1,3-6 are currently amended.

Response to Arguments

2.   In response to applicant's argument page 8, first paragraph

that "Hsu, therefore, is concerned with the costs that are

advertised at a router but does not address selecting with OSPF

aggregates to advertise by an area border route." Examiner notes

that Hsu teaches "OSPF introduces the concept of area to improve

Autonomous System (AS) scalability through topology hierarchy.

In this section, we consider extending the multi-class algorithm

with cost bias to inter-area routing scenarios. The biased cost

route selector follows the approach in which the area border

routers (ABRs) calculate the available path bandwidths to

networks external to an area and advertise them in the summary

LSAs (or some new Opaque LSAs." (Col. 10, lines 22-41).

In response to applicant's argument in page 8, last paragraph that "Hsu does not teach selects at least a subset of said candidate OSPF aggregates such that a selected shortest path length between a particular source and destination subnets resulting from advertisement of a set of weighted aggregates approaches said shortest path length between said particular source and destination subnets irrespective of said advertisement." Examiner notes that HSU teaches this limitation as explained in the previous action. Particularly, the abstract shows selecting a route for a flow from a plurality of networks paths (OSPF aggregates, see fig. 3 and col.5, lines 28-58) connecting a source to a destination. Further Hsu teaches a cost (weight) of a link which is the product of its static cost from link state advertisement and calculated cost bias factor for each link col. 6, lines 29-65 and col. 10, lines 13-61].

In response to applicant's argument in page 10, second paragraph that " Hsu does not does not employ a search heuristic..." Examiner notes that Rabinovich teaches this limitation see for example col. 10, lines 31-65 and col. 15, lines 60 to col. 16, line 22]. Using heuristic to assign weight or other functions is a matter of design choice.

In response to applicant's argument in page 10, first paragraph

that "Rabinovich does not teach or suggest assigning weights

based on an average distance but teaches assigning weights for

each individual link." Examiner notes that Rabinovich is used to

for the issue of the average distance of subnets in an area

(autonomous system areas) as disclosed in Col. 14, lines 8-33

and col. 19, lines 12 to col. 20, line 10. Assigning weights are

taught by Hsu. Applicant must look the references in their

entirety and not on individual basis.

Claim Rejections - 35 USC § 102

> (e) the invention was described in a patent granted on an application for
> patent by another filed in the United States before the invention thereof
> by the applicant for patent, or on an international application by another
> who has fulfilled the requirements of paragraphs (1), (2), and (4) of
> section 371(c) of this title before the invention thereof by the applicant
> for patent.

The changes made to 35 U.S.C. 102(e) by the American

Inventors Protection Act of 1999 (AIPA) and the Intellectual

Property and High Technology Technical Amendments Act of 2002 do

not apply when the reference is a U.S. patent resulting directly

or indirectly from an international application filed before

November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the

amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.   Claims 1-5 are rejected under 35 U.S.C. 102(e) as being

anticipated by HSU USPN (6363319).

As per claim 1, Hsu teaches a system for selecting open shortest

path first (OSPF) aggregates to advertise (summary information

of network fig. 1c and col. 5, 44-54), comprising:

      a database configured to include (database 154, Fig. 1D)

candidate OSPF aggregates and corresponding weights (link cost)

[fig. 1C and col. 4, 38-45 and col. 5, 44-54]; and

      an aggregate selector (fig. 1c BCRS 115C), associated with

said database, configured to select at least a subset of said

candidate OSPF aggregates to advertise by an area border router

"OSPF introduces the concept of area to improve Autonomous

System (AS) scalability through topology hierarchy. In this

section, we consider extending the multi-class algorithm with

cost bias to inter-area routing scenarios. The biased cost route

selector follows the approach in which the area border routers

(ABRs) calculate the available path bandwidths to networks

external to an area and advertise them in the summary LSAs (or

some new Opaque LSAs." (Col. 10, lines 22-41), such that a path

length between a particular source and destination subnets (col.

4, lines 1-17 and col. 5, lines 44-52) selected from

advertisement of weights corresponding to said subset approaches

a shortest path length between said particular source and

destination subnets irrespective of said weights advertised [the

cost (weight) of a link is the product of its static cost from

link state advertisement and calculated cost bias factor of for

each link col. 6, lines 29-65; and col. 10, lines 13-61].

As per claim 2, Hsu teaches the system as recited in claim 1

wherein said aggregate selector treats errors in said selected

path length as having unequal degrees of importance [col. 7,

lines 36-55 and col. 11, lines 25-61].

As per claim 3, Hsu teaches a method of selecting open shortest

path first (OSPF) aggregates (summary information of network

fig. 1c and col. 5, 44-54) for advertising, comprising:

    storing data pertaining to candidate OSPF aggregates and

corresponding weights (link cost) (col. 4, lines 33-45 and col.

5, 44-54); and

    selecting at least a subset of said data pertaining to said

candidate OSPF aggregates (summary information of network fig.

1c) such that a selected path length between said particular

source and destination subnets (col. 4, lines 1-17 and col. 5,

lines 44-52) resulting from advertisement of weights

corresponding to said subset approaches a shortest path length

between said particular source and destination subnets
irrespective of said advertisement [the cost (weight) of a link
is the product of its static cost from link state advertisement
and calculated cost bias factor of for each link col. 3, lines
15-20; col. 6, lines 29-65 and col. 10, lines 13-61].

As per claim 4, Hsu teaches the method as recited in claim 3
wherein said selecting comprises computing a lower bound or
error for said candidate OSPF aggregates employing a set of
recursive equations treating errors in selected shortest path
length as having unequal degrees of importance [col. 6, lines 61
to col. 7, lines 56 and col. 11, lines 25-56. see also col. 12,
lines 31-39].

As per claim 5, Hsu teaches an autonomous network domain (fig.
1c and col. 10, lines 22-41), comprising:

      plurality of routers and interconnecting segments that
cooperate to form subnets and paths there between (see fig. 1C);
and

      a system for selecting open shortest path first (OSPF)
aggregates for selecting including:

      a database (database 154, fig. 1D) for containing candidate
OSPF aggregates and corresponding weights (link cost) (col. 4,

lines 1-17), and an aggregate selector (fig. 1C, BCRC 115 C),

associated with said database, that selects at least a subset of

said OSPF aggregates to advertise by an area border router "OSPF

introduces the concept of area to improve Autonomous System (AS)

scalability through topology hierarchy. In this section, we

consider extending the multi-class algorithm with cost bias to

inter-area routing scenarios. The biased cost route selector

follows the approach in which the area border routers (ABRs)

calculate the available path bandwidths to networks external to

an area and advertise them in the summary LSAs (or some new

Opaque LSAs." (Col. 10, lines 22-41) such that a selected path

length between said particular source and destination subnets

(col. 4, lines 6-17 and col. 5, lines 44-52) resulting from

advertisement of weights corresponding to said subset approaches

a shortest path length between said particular source and

destination subnets irrespective of said weight advertised [the

cost (weight) of a link is the product of its static cost from

link state advertisement and calculated cost bias factor of for

each link col. 3, lines 15-20; col. 6, lines 29-65 and col. 10,

lines 13-61].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

4.   Claim 7-21 rejected under 35 U.S.C. 103(a) as being

unpatentable over HSU USPN (6363319) in view Rabinovich USPN.

(6256675).

As per claims 7, 12 and 17, Hsu teaches a system for selecting

open shortest path first (OSPF) aggregate weights (link cost)

for a particular area (fig. 1C area 102), comprising:

a database for containing data pertaining to candidate OSPF

aggregates [col. 4, 38-45 and col. 5, 44-54]; and

a weight assigner, associated with said database, that

assigns, for said OSPF aggregates, weights for an area

particular area border router (ABR) of said area [col. 5, lines

44-63 and col. 6, line 30-61. see also col. 10, lines 13-61].

Although HSU shows substantial features of the claimed invention

as explained in claims 7,1 2 and 17 including a cost (weight)

for links, he does not explicitly show weights based on average

distance of subnets in an area.

Nonetheless, this feature is well known in the art and would

have been an obvious modification of the system disclosed by

HSU, as evidenced by Rabinovich USPN. (6256675).

In analogous art, Rabinovich whose invention is about a system

for allocating requests for objects in a routed network using

protocols such OSPF and BGP, disclose autonomous system with

preference path based on average distance of subnets in an area

(autonomous system areas) [Col. 14, lines 8-33 and col. 19,

lines 12 to col. 20, line 10]. Giving the teaching of

Rabinovich, a person of ordinary skill in the art would have

readily recognized the desirability and the advantage of

modifying HSU by employing the system of Rabinovich for the

benefit of routing data packets destined to remote hosts on the

closest and shortest path.

As per claims 8,13 and 18, Rabinovich teaches the invention

wherein said weight assigner employs a search heuristic to

assign said weights [col. 10, lines 31-65 and col. 15, lines 60

to col. 16, line 22].

As per claims 9,11,14,16,19 and 21, Hsu teaches the invention wherein said weight assigner treats errors in path lengths in said area as having unequal degrees of importance [col. 7, lines 36-55 and col. 11, lines 25-61].

As per claims 10,15 and 20, these claims include similar limitations addressed in claims 7 and 8. Therefore, they are rejected with the same rationale.

Allowable Subject Matter

5.   Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6.   **ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this

action. In the event a first reply is filed within **TWO MONTHS**

of the mailing date of this final action and the advisory action

is not mailed until after the end of the **THREE-MONTH** shortened

statutory period, then the shortened statutory period will

expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated

from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

The prior made of record and not relied upon is considered

pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier

communications from the examiner should be directed to Yasin

Barqadle whose telephone number is 571-272-3947. The examiner

can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Glenn Burgess can be

reached on 571-272-3949. The fax phone numbers for the

organization where this application or proceeding is assigned

are 703-872-9306 for regular communications and 703-746-7238 for

After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

Art Unit 2153

ABDULLAHI SALAD
PRIMARY EXAMINER